Assessment of Two Computer-Based Products: The Military Decision-Making Process and the Brigade Battle Captain

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This report documents the user evaluation of two prototype training products originally designed for the Joint Readiness Training Center (JRTC). The products are a computer-based, stand-alone, training package designed to assist individuals and staffs of light Infantry brigades in learning to participate in the military decision-making process (MDMP) and a program geared toward the responsibilities of the Brigade Battle Captain. The courses are based on doctrine and also contain numerous tactics, techniques, and procedures that will assist staff officers in understanding and mastering their individual skills and their role in the collective process. Based on user feedback, these programs appear to be successful.

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ASSESSMENT OF TWO COMPUTER BASED PRODUCTS: THE MILITARY DECISION-MAKING PROCESS AND THE BRIGADE BATTLE CAPTAIN

EXECUTIVE SUMMARY

Research Requirements:

In response to frequently identified weaknesses in the ability of battle staff members to perform under the stress of Combat Training Center (CTC) missions, two computer-based courses were developed by the U.S. Army Research Institute (ARI), Infantry Forces Research Unit. One course contains material designed to train battle staff members in the Military Decision-Making Process (MDMP) and the other course was designed to train Battle Captains. The two courses contain both doctrinal material and tactics, techniques, and procedures (TTPs) provided by personnel from the Joint Readiness Training Center's (JRTC) Leaders Training Program (LTP).

The purpose of the research was to perform an assessment of the effectiveness of the MDMP and Brigade Battle Captain courses. Because both courses contain materials from doctrinal manuals as well as TTPs gathered from lessons learned, the evaluation examined the programs from both perspectives. The intent of the assessment was to provide a foundation for building better training materials in the future, and to make any improvements to these two prototype products.

Procedure:

Volunteer officers from Active Duty, National Guard, and Army Reserve units participated in the assessment of the two courses. Officers were given a CD containing the program and instructed to complete the course at their own pace. After completion of the course, the test subject officers filled out an evaluation form designed to provide the researcher with their opinions on the effectiveness of the course materials.

Findings:

Both courses were well received by the officers participating in the evaluations. More than 75% rated the lessons and sub lessons as being "generally effective" or very effective." The TTPs included in the courses were viewed as the most beneficial aspects of the courses. The test officers also provided opinions on the course content and course design. For course content, the officers cited areas in need of more material (e.g., Emergency Jump TOC Procedures) or less material (e.g., Issue Warning Order). The most frequent course design request was for a bookmark feature that would allow quick return

to an uncompleted lesson. However, for the most part, the test officers indicated that the courses were effective training vehicles.

Utilization of Findings:

The design of future courses can be enhanced based on the feedback elicited from the test officers. In addition, the course content can be changed in any upgrades to these prototype training programs to better reflect the needs of officers filling battle staff positions. ARI has received many requests for the materials in their current form and they are being distributed to battalion and brigade staff officers prior to attendance at JRTC's LTP.

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Background

In the early 1990s, the U. S. Army Research Institute (ARI) conducted several large-scale research programs at the Combat Training Centers (CTCs). Much of the work reported concentrated on Infantry battalions and the relationship between the amount and content of their home station training and their subsequent performance at either the National Training Center (NTC) or the Joint Readiness Training Center (JRTC). (See Holz, Hiller and McFann, 1994, for a comprehensive overview of this research on measuring and managing unit training readiness.)

A recurrent and somewhat unexpected finding or byproduct of this research program was that many battalion and brigade staff officers, apparently capable of performing their jobs at home station, do not do well under the stress of a CTC rotation. As reported in <u>Battle Staff Training and Synchronization in Light Infantry Battalions and Task Forces</u> (Thompson, Thompson, Pleban, & Valentine, 1991), performance shortfalls by battle staffs were widespread, and appeared to stem in large part from a lack of training programs and materials for staff officers. Staffs did not know their jobs, and staff performance was not synchronized.

While Officer Advance Course training formerly covered materials related to functional area training, two things have changed. First, the staff-specific material that used to be taught in Advance Courses has been largely eliminated, and more importantly, present day officers typically have already had several battalion or even brigade staff positions before their attendance at an Advance Course. As a result, they have normally had very little formal training related to their own individual jobs. The finding that many officers have held staff positions without benefit of relevant training, also confirmed by Salter (1994), goes across branches and jobs. Typically only the motor officer or the S2 (Intelligence Officer) has had formal training in his "specialty." The rest of the staff members, especially at battalion level, learn their jobs as they experience them.

Performance at home station is adequate when stress is limited. Many activities have sufficient lead-time to permit relatively leisurely on the job training. The fast paced CTC rotations, however, permit little recovery time, and exact a greater penalty for errors (Thompson, et al., 1991, and Thompson, Pleban and Valentine, 1994). A staff officer who is not thoroughly versed in his job will be unable to perform under such pressure. Numerous articles from the bulletins and newsletters produced under the auspices of the Center for Army Lessons Learned (CALL) at Fort Leavenworth, Kansas, confirmed this research.

Preliminary Solutions

Because evidence suggested that many staff officers lack the basic knowledge necessary to perform their jobs, an obvious first step toward improving performance was to create materials outlining required staff functional duties and responsibilities. The Commander's Battle Staff Handbook (Pleban, Thompson, & Valentine, 1993) was designed to assist staff members with these skills and as a tool to organize staff training. The intent of this product was to provide staff officers a quick reference that would serve as a guide toward their overall responsibilities.

Another attempt to provide detailed knowledge based training to young officers came from a series of projects sponsored by the Defense Advance Research Projects Agency (DARPA). Many of these DARPA sponsored training programs were focused on personnel in the Army National Guard. One of the first training programs, individual computer-based and text-based instruction was developed by ARI at Fort Benning, and distributed in a prototype version first for Infantry battalion, then for brigade staffs (André and Salter, 1995, 1996a, 1996b, 1996c). These programs provided a staff operations overview coupled with individual doctrinally based instruction in each of thirteen staff positions. Included are interactive software and text supporting materials for the XO, S1, S2, S3, S3 Air, S4, Fire Support Officer, Signal Officer, Engineer, Chemical Officer, Air Defense Artillery Officer, and Chaplain. An additional Common Core Course provides information that pertains to all staff positions. Available on floppy disc, this program provided preliminary structured and standardized initial training for individual staff personnel.

This introductory effort was refined, adapted and expanded by ARI at Fort Knox to comprise a set of training materials specifically geared toward students at the Armor Advance Course. This work, collectively referred to as the Battle Staff Training System (BSTS), is reported in André, Wampler and Olney (1997). The BSTS consists of a combination of text and computer based materials, together with end of lesson checks on learning and end of course tests. Like the original DARPA sponsored National Guard version, BSTS has paper-based materials, multiple floppy discs, and an embedded training management system. Individual soldiers receive self-paced instruction on the requirements of their staff jobs. A follow on to this research, conducted by ARI under the Force XXI Training Program, expanded the individual training modules, added the Commander position, and provided a greater proportion of computer lessons, to include the Common Core, totally computer-based. A full description can be found in Wampler and Livingston (1998).

The goal of all of these training materials, whether computer-based or paper products, was to provide staff officers with the basic required information necessary to perform their specific staff jobs. The training materials are doctrinally based, and are geared toward individual instruction for each of the battalion and brigade staff positions.

Problem

However, this material which provides individual staff position content, is only the first step in training staff officers. The *BSTS* versions allow little interaction with other staff officers. That is, the training is mostly knowledge based and geared to teach individual primary job responsibilities. Still missing from these first attempts at staff training were opportunities for the staff officers to interact with other staff officers to practice their craft. Also, these programs had very limited tactics, techniques, and procedures (TTPs) – the "how to" of the tasks. Once staff members know and understand their primary duties and responsibilities, they must work together in planning and executing their battlefield functions.

The Military Decision-Making Process

The Military Decision-Making Process (MDMP) is one vehicle which allows staff members to work together to achieve their mission. The MDMP is the thought process used for examining the battlefield. It is an adaptation of the Army's analytical approach to problem solving - a single, established, and proven process. It comprises a series of actions, changes, or functions that achieve an end result. Each step begins with certain input that builds upon the previous steps. The MDMP thus consists of a series of well-documented steps which, if followed, permit a staff to effectively and efficiently plan for a mission. The MDMP, however requires not only that the officer knows his own job, but how that job interacts with and in turn depends on the activities performed by other staff members. In other words, successful implementation of the MDMP requires coordination.

CALL Bulletins and Newsletters have repeatedly identified staff problems in execution of the MDMP and specific deficiencies in staff planning (i.e., steps of the MDMP). In CTC Bulletin 93-4 (1993) weaknesses in synchronization matrix development and course-of-action (COA) development were reported. Additional evidence that training needs existed across all battlefield operating systems for MDMP was reported in CTC Trends Joint Readiness Training Center 4QFY95 and 1QFY96 (1995) and NTC Priority Trends (1996). In most cases, even when individuals knew their own jobs, they were unaware of how to integrate them with the rest of the staff.

Therefore, training which contains only individual staff member information is not enough. Even after the preliminary ARI training products, especially the <u>Commander's Battle Staff Handbook</u> (Pleban, Thompson and Valentine, 1993) became widely available at the CTCs, reports of deficiencies in MDMP steps were widespread (e.g., CTC Trends JRTC 2QFY97 & 3QFY97, 1997; CTC Trends 98-14, 1998b; CTC Quarterly Bulletin 98-12, 1998a). These deficiencies indicate that there is a definite need for training that includes TTPs and the basics of staff interaction.

Personnel from the JRTC emphasized this finding. The JRTC Leaders Training Program (LTP) requires brigade and battalion staffs to respond to an order by developing a plan – i.e., by executing the MDMP. Personnel from the LTP noted that

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brigade and battalion staff personnel often had difficulty in implementing the MDMP. At the LTP it was apparent that many staff officers still did not know their jobs, and of those that did, many had had little experience in integrating their jobs with the rest of the staff. Too many brigade and battalion staffs were unaware of how actually to execute the MDMP.

To respond to that expressed need, to have staffs better versed in the MDMP, ARI developed the first of several compact disc (CD) computer-based programs. The *Military Decision-Making Process* course is totally computer based (no text) and is administered through a self-loading CD program. Developed in concert with the JRTC LTP personnel, the *MDMP* follows the seven step MDMP process: Receipt of Mission, Mission Analysis, Course of Action Development, Course of Action Analysis (Wargaming), Course of Action Comparison, Course of Action Approval, and Orders Production. The *MDMP* course targeted selected steps of the MDMP, and provided useful TTPs, not only for the entire staff, but selected TTPs for the commander, the XO, S1, S2, S3, S4, Fire Support Officer, the Aviation Commander, and combat support personnel. The lesson content of the *MDMP* was adopted from Field Manual (FM) 101-5, Staff Organization and Operations (DA, 1997). The unique information, material not found in the FM, comprises the TTPs, which are incorporated into each of the lessons. TTPs from JRTC lessons learned and the LTP are contained in the lessons for the appropriate staff members. Fuller description of the CD based *MDMP* program, reviewed and administered by the JRTC, is reported in Wampler, Centric and Salter (1998b).

Information Management

Along with reported breakdowns in the MDMP process, CALL Newsletters and Bulletins have documented problems in battle tracking and information management (e.g., NTC Priority Trends, CALL, 1996 and CTC Trends JRTC, CALL, 1997). These problems appear to be common across battlefield operating systems. Commanders do not receive the information necessary to see the battlefield in a timely manner, or in the level of detail they need.

In order for a staff to properly execute their mission, battlefield information must be tracked, analyzed, and acted upon. The Tactical Operations Center (TOC) serves as the unit's information center. For successful mission execution, the TOC must process an enormous number of messages, reports, and orders. All information from these sources must be analyzed and acted upon by alerting the appropriate staff sections. Members of the TOC must know their responsibilities and what actions to take based on the available information. Actions may include prioritizing information, decision making, and informing other sections. The key staff member to help synchronize this management of information is the Battle Captain (Mc Williams, 1998).

The Battle Captain is responsible for deciding where incoming information must go to be processed. The Battle Captain must conduct a quick analysis to ensure the data are timely and accurate. The analysis should include who gets the information,

what should be done to it, and how it will impact on the mission. In other words, the Battle Captain serves as a crisis management supervisor (Mc Williams, 1998). As important as the position of Battle Captain is to the TOC, there are no existing formal doctrinal publications for this job, and there is no Table of Organization and Equipment (TO&E) position labeled Battle Captain. However, units understand the importance of the position and every TO&E unit uses a Battle Captain - an officer/NCO to coordinate and supervise TOC activities (Smith, 1997).

The ideal individual selected to be the Battle Captain would be a senior captain who has already completed a company command. More likely, however, the Battle Captain is a senior lieutenant or very junior captain who has recently graduated from the advanced course. He (or she) may have little or no time in a staff job, and in many cases, is the newest member of the staff. Since there are no formal doctrinal publications to train Battle Captains, and because individuals serving as Battle Captains have limited experience, a need exists for standardized doctrinally based training material geared for the Battle Captain. The JRTC has incorporated a Battle Captain Course into the LTP to insure that the officer selected for this critical position is aware of the job's responsibilities. However, this material is available only to designated Battle Captains, already in the job (Smith, 1997). Nothing is available for an individual or a unit to study in advance, to prepare for the job.

To address some of these identified Battle Captain problems, ARI again created a CD based training program, to assist the new or potential Battle Captain in the performance of his job. Much of the material came from the CALL bulletins and newsletters; a great part came from the JRTC LTP materials (Smith, 1997). The genesis of the *Brigade Battle Captain* Course and a full description can be found in Wampler, Centric and Salter (1998a).

Target Audience for the *MDMP* and *Brigade Battle Captain* Programs

The ARI developed training packages were originally designed for and in conjunction with the JRTC. Since the *MDMP* was developed specifically for the JRTC LTP, it contains some materials tailored explicitly for their program. It is also rather heavily light Infantry in focus and examples, although the materials are relevant for mechanized Infantry and other branches. The program provides doctrinal training on staff responsibilities in using the MDMP model and additional TTPs are provided where appropriate for each staff position/section to include the same thirteen as were featured in the original Battle Staff Training Program materials. The *Brigade Battle Captain* program, based on JRTC-provided information, also benefited from assistance from the Ranger Training Brigade, the U. S. Army Engineer School, and the U. S. Army Infantry School. This program contains TTPs from CALL bulletins and newsletters, and from materials in use at the Armor and Infantry Advance Courses and all three CTCs. Although *Brigade Battle Captain* was designed with the Infantry in mind, the materials are equally useful for Battle Captains at battalion level, and in non-Infantry branches.

Purpose

The purpose of the research reported here was to perform a limited assessment of the effectiveness of the *MDMP* and *Brigade Battle Captain* training programs. The overall intent was to ensure that the programs effectively train individuals in their duties and responsibilities. Because both programs include materials from the doctrinal manuals as well as TTPs gathered from lessons learned, the evaluation examines the programs from both a doctrinal and practical standpoint. This is especially important in the case of the Battle Captain program. Frequently when there is no formal training available, any new training is considered better than no training, and it is therefore deemed effective. This research considers both the strengths and weaknesses of the two courses. This assessment should provide a foundation for building better training in the future, and making improvements to these prototype products.

Method

Subjects

The subjects used in this assessment were all volunteers. Their ranks ranged from second lieutenant to lieutenant colonel and they came from Active Duty, National Guard, and Army Reserve units. Personnel included small group instructors and students from the Infantry Officer Advance Course, cadre from the Ranger Training Brigade, the 36th Engineer Group, and the 75th Ranger Regiment. Additional respondents were both trainers and reserve staff personnel from the 48th Infantry Brigade (GA), and trainers and reserve staff from the 38th Infantry Field Training Group (IN).

Procedure

The original design of this evaluation called for MDMP knowledge pre- and post-tests to measure training effectiveness, followed by surveys to collect participant opinions on the value of the courses. However, since the self-paced training took an unpredictable (individually variable) number of hours to complete, the unit instructed the officers to complete the training "when possible." Unfortunately, several of the test subjects deployed with their units on a real world mission prior to their completion of the training. The pre-test/post-test plan was therefore abandoned and only the evaluation forms were used. The Course Assessment forms are shown at Appendix A.

For both evaluations, the procedures were the same. Officers were given a CD containing the program and instructed to complete the course at their own pace. The researcher kept in contact with the participants to ensure progress. After the course had been completed, the test subject officers filled out the evaluation forms to provide the researcher with their opinions on the effectiveness of the course materials.

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Results

The results are presented separately for the *MDMP* course and the *Brigade Battle Captain* course. The former results are presented first.

MDMP

Forty-seven officers rated the *MDMP* course using the Course Assessment form. Course content was rated using a five-point scale with 1 being "very effective" and 5 being "very ineffective". For the most part, the course content was rated as being effective. There were no negative ratings for any of the items. Most of the items were rated as being either "very effective" (29%) or "generally effective" (53%). Only 18% of the items were rated as being only "somewhat effective". Table 1 provides the ratings for the specific lessons contained within the *MDMP* course.

Table 1.
MDMP Course Ratings for Individual Lessons (Percentages).

Lesson / Rating	Very Effective	Generally Effective	Somewhat Effective	Generally Ineffective	Very Ineffective
Receipt of Mission	17	75	9	0	0
Mission Analysis	6	66	28	0	0
COA Development	13	68	19	0	0
COA Analysis	17	70	13	0	0
COA Comparison	38	53	9	0	0
COA Approval	13	79	9	0	0
Orders Production	38	40	21	0	0

Note. N = 47.

The lesson on *Course of Action (COA) Comparison* was the highest rated lesson with 38% of the ratings as "very effective" and 53% of the ratings as "generally effective." Most of the comments for this lesson were positive (e.g., "good techniques"). *Mission Analysis* was the lowest rated lesson with only 6% of the ratings as "very effective" and 28% of the ratings as "somewhat effective." The negative comments focused on the lack of information on some topics and too much information on other topics. For example, several officers felt that there was too little emphasis on *Commander's Critical Information Requirements (CCIR)* and the development of the initial *Commander's Intent*. *Risk Assessment and Risk Management* was cited as a subject that was covered in too much detail.

Ratings were also collected for the content areas within *Mission Analysis*. The survey contained more detail for rating this lesson because mission analysis is often the area of the MDMP cited as weak (e.g., NTC Priority Trends, 1996). Within *Mission Analysis*, the subject rated the lowest was the lesson on *Identification of Specified and Implied Tasks* with more than half of the ratings being only "somewhat effective". Typical comments were that the subject was "too basic." *Risk Assessment* was ranked

highly with almost half of the ratings being "very effective." This rating contrasts with many of the previous comments which stated that there was too much emphasis placed on risk assessment. Although over half the ratings were "very effective," 23% of the ratings were "somewhat effective." It may have been that the individuals rating *Risk Assessment* lower felt more strongly about their rating than those rating it higher. Table 2 contains the rankings for all of the sub-lessons of *Mission Analysis*.

Table 2.
Mission Analysis Sub-lesson Ratings (Percentages).

Sub-Lesson/ Rating	Very Effective	Generally Effective	Somewhat Effective	Generally Ineffective	Very Ineffective
Development of Mission Analysis Products	19	43	38	0	0
Identification of Specified and Implied Tasks	30	17	53	0	0
Identification of Available Assets	26	23	51	0	0
Mission Constraints and Restrictions	9	60	32	0	0
Risk Assessment and Risk Management	47	30	23	0	0
Mission Analysis Briefing Format	17	68	15	0	0
Commanders Guidance	17	51	32	0	0
Second Warning Order	26	55	19	0	0
Practical Exercises for Mission Analysis	6	57	36	0	0

Note. N = 47.

Table 3 contains the ratings of the TTPs for each of the key staff members. Comments tended to be very positive such as "the TTPs were the best part of the course." The only negative comments were from those individuals wanting more CTC rotation-based TTPs, i.e., more information that would help them during their CTC training event.

The second set of survey questions focused on how well the officers liked the design of the courseware and whether they would use it for training other staff personnel. All 47 respondents checked that the courseware was "very easy" to use. Forty-one of the respondents indicated that they would implement the courseware into their staff training. Of the six saying they would not implement the courseware into their staff training, three said that they did not have a staff and one stated that the material was too focused on JRTC. These results mirror the question asking the respondents whether the courseware was relevant to their unit. Forty-one responded yes, five responded no and one did not respond. The results of the overall training ratings are presented in Table 4.

Table 3.
Ratings for TTPs (Percentages).

TTP/ Rating	Very Effective	Generally Effective	Somewhat Effective	Generally Ineffective	Very Ineffective
Overall TTPs	40	57	2	0	0
Commander TTPs	51	28	6	0	0
XO TTPs	53	43	4	0	0
S1 TTPs	36	60	4	0	0
S2 TTPs	51	43	6	0	0
S3 TTPs	26	57	17	0	0
S4 TTPs	47	49	4	0	0
FSO TTPs	60	34	6	0	0
Engineer TTPs	30	66	4	0	0
Other Staff Members	26	70	4	0	0

Note. N = 47 except for commander, N = 40.

Table 4.
Ratings of Overall Training Received on MDMP (Percentages).

Statement	Rating (%)
EXCEPTIONAL. Training is above expectations.	0
OUTSTANDING. Most required information can be trained with very few modifications.	87
STANDARD. Acceptable training capability.	13
MINIMAL TRAINING PROVIDED. Major modifications will be needed to provide adequate training.	0
POOR. Cannot train because of poor design and content.	0
UNACCEPTABLE. Provides negative training.	0

Note. N = 47.

The remaining questions elicited opinions on the best and worst features of the training. Some respondents focused on specific features of the courseware. For example, the most often cited positive feature was the user friendliness of the software. Negative features frequently cited were the length of time to exit the program and the lack of a bookmark feature to quickly find your place when you come back. Several respondents requested a job aid feature that would provide blank charts to fill in current data while the user is in the program.

Other respondents focused on course content. For example, positive comments were made about the TTPs. However, more detail on *Mission Analysis* (e.g., *decisive point, commanders' intent, key terrain*, and *CCIR*) was cited as content that should be added to the training materials.

Brigade Battle Captain

Sixty-one officers rated the *Brigade Battle Captain* course using the Course Assessment Form (see Appendix A). Again, the course content was rated using a five-point scale with 1 being "very effective" and 5 being "very ineffective." Like the *MDMP* course, the *Brigade Battle Captain* course content was primarily rated as effective. One sub lesson contained within the *Battle Tracking* lesson contained two negative ratings (i.e., *Battle Rhythm*, "Generally Ineffective" 3%). Otherwise, there were no negative ratings for any of the items. Most of the items were rated as being either "very effective" (47%) or "generally effective" (44%). Table 5 provides the ratings for the specific lessons contained within the course.

Table 5.
Ratings for *Brigade Battle Captain* Lessons and Sub-Lessons (Percentages).

Rating	Very Effective	Generally Effective	Somewhat Effective	Generally Ineffective	Very Ineffective
Overall TTPs	25	75	0	0	0
Job Aids (overall)	20	67	13	0	0
Battle Captain Overview	39	52	8	0	0
Defining Battle Captain	77	13	10	0	0
Roles & Responsibilities	74	26	0	0	0
Battle Captain Notebook	53	47	0	0	0
Common Problem Areas	56	41	3	0	0
Managing Information	24	69	7	0	0
CCIR	44	49	7	0	0
RFI	42	43	15	0	0
Battle Tracking	18	75	7	0	0
Battle Rhythm	38	43	16	3	0
Battle Tracking Techniques	47	43	10	0	0
Planner/Decision Maker	49	43	8	0	0
Role in Decision-Making Process	57	36	7	0	0
Battle Planning Tools	46	47	7	0	0
Issue WARNO & FRAGO	64	25	11	0	0
OPORD Production	69	18	13	0	0
TOC Shift OIC	54	30	16	0	0
Shift Change Planning & Briefing	54	41	5	0	0
Briefing Visitors	49	46	5	0	0
TOC Security	47	33	20	0	0
Staff Battle Drills	38	42	20	0	0

Note. N = 61. RFI = Requests for Information; WARNO = Warning Order; FRAGO = Fragmentary Order; OPORD = Operations Orders; OIC = Office in Charge.

The highest rated sub lessons were contained within the *Battle Captain Overview* lesson. *Defining Battle Captain* was rated by 77% of the respondents as "very effective,

while 74% rated *Roles and Responsibilities* as "very effective." Comments were consistent with the ratings, but they did not provide additional information (e.g., "good lesson," "good info"). However, for the major lessons, *TOC Shift OIC* had the greatest percentage of respondents (54%) rating it as "very effective."

The overall lesson receiving the fewest "very effective" ratings was *Battle Tracking*. It received only 18%. Most of the negative comments focused on the need for more examples and more TTPs. Many respondents felt that this important section was too brief and too generalized in content.

Additional questions were asked about the general effectiveness of the course content and the courseware design. Eighty-two percent of the respondents indicated that the courseware was very easy to use. Ninety-five percent felt that the course content was relevant to their unit and that they would incorporate the training into their unit training. Ninety-two percent indicated that the design of the courseware enhanced learning of the material. Of the few that indicated the design distracts from learning, the most common complaint was that the scenes on the slides were repetitive. Some also commented that the graphics were slow loading. When asked about the overall quality of the training, 69% checked that the training was "Outstanding. Most required information can be trained with few modifications." The remaining 31% checked "Standard. Acceptable training capability."

The remaining three questions of the survey asked for opinions on the best features, the worst features, and any additional training content which should be included in the program. Responses to the question on what they felt were the best features were consistent with the lesson ratings. Most respondents indicated that the best part of the course was the description of the Battle Captain *Roles and Responsibilities*. The question pertaining to the worst features elicited two main areas, content and program features. For content, many felt that there was too much time spent on *Issue Warning Order* and *Operations Orders Production*. Most felt that extra time should be spent on *Battle Tracking* by providing examples and vignettes. For program features, many felt that the program loaded too slowly and that there should be a bookmark feature added.

The question regarding additional features needed provided a variety of responses. The most frequently mentioned content items were emergency jump TOC procedures, key staff responsibilities, vignettes (historical), and samples of TOC configurations and TOC SOPs. The program features most requested were the bookmark for easy access, and end of section quizzes.

Discussion

Trained and efficient battle staffs are key to successful mission accomplishment in combat or the combat training provided at the CTCs. Many apparent training deficiencies have been documented from lessons learned at the CTCs and described by CALL. As noted, many of the shortcomings experienced by battle staffs come from

problems in execution of the MDMP and with battle tracking. The *MDMP* course, developed to reinforce current doctrine as well as to provide TTPs from lessons learned, should permit staff personnel to better apply the MDMP process. Although the material was available already, standardized in doctrinal manuals, staffs were unaware of how to use it. This course, designed to be self-paced, should help staff personnel to master the process, and the synchronization required of a staff. For the *Brigade Battle Captain*, the course was developed to provide a standardized format for a non-doctrinal position. It serves that purpose and provides practical TTPs, tested by other staffs, to assist in the process of training the new Battle Captain.

Course Evaluations

Both courses were well received by the soldiers participating in the evaluations. More than 75% rated the lessons and sub lessons as being "generally effective" or "very effective." The TTPs included were seen as the most beneficial aspects of the courses. Because there is no formal training for the Battle Captain, another highly regarded area of training was the *Duties and Responsibilities* lesson contained in *the Brigade Battle Captain* Course.

The most common complaint for both courses was the lack of a bookmark feature. Many respondents felt a need for a bookmark feature because of the length of the courses. The feature would allow students to return to the place in the course where they left off without having to page through a lot of previously viewed material. Another feature that many of the respondents wanted to see added was an interactive practical exercise. They felt that an exercise using historical data would allow the student to practice the material learned in the programs.

Some of the other areas that were requested had to do with how the various staff members interact. Because different personnel reviewed the *MDMP* and the *Brigade Battle Captain* courses, the test subjects were unaware that other courses with other TTPs might contain the information they wanted. For example, there were a few respondents who indicated a need for greater definition of other battle staff member duties in their review of the *Brigade Battle Captain* course. However, more than a general discussion is outside the scope of the course which was intended to provide only a general overview. Personnel desiring more information would be referred to the appropriate field manuals, to the *MDMP* Course, or to the *Battle Staff Training System* courses for more detailed information.

Conclusion

The *MDMP* and the *Brigade Battle Captain* computer based instruction courses were well received by the evaluation respondents. In fact, ARI had received requests for the material even prior to the external evaluation. This was no doubt in large part due to the fact that there has been a lack of available training material for these two subject areas. The design of future courses would be enhanced by a means for returning to a lesson if the student exits the training before completion. In addition,

training would be enhanced with interactive practical exercises using historical data from CTCs and real world examples. In sum, however, and based on the replies of the participants, these prototype courses are a good first step in training both the procedures and steps of the military decision-making process, and the duties and responsibilities of the Battle Captain.

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APPENDIX A

MDMP and Battle Captain Course Evaluation Forms

Military Decision Making Course Assessment

Duty Position _____ Time in current duty position _____ Unit Type_____

1. Use the following scale to rate how effectively you think the courseware trains the following tasks.

**1 = Very effective 2 = Generally effective 3 = Somewhat effective
4 = Generally ineffective 5 = Very ineffective N/A = Did not train**

Task	Rating	Comment
Tactics Techniques and Procedures (TTP) (overall)		
Commander TTPs		
XO TTPs		
S1 TTPs		
S2 TTPs		
S3 TTPs		
S4 TTPs		
FSO TTPs		
Engineer TTPs		
Other staff Members		
Receipt of Mission (overall lesson)		
Mission Analysis (overall lesson)		
Development of mission analysis products (e.g., R& S plan, Enemy Situation Templates)		
Identification of specified & implied tasks		
Identification of available assets		
Identification of mission constraints & restrictions		
Risk assessment & risk management		
Mission Analysis briefing format		
Commander's guidance		
Second warning order		
Practical exercises for Mission Analysis		
COA Development (overall lesson)		
COA Analysis (overall lesson)		
COA Comparison (overall lesson)		
COA Approval (overall lesson)		
Orders Production (overall lesson)		

2. How easy is the courseware to use?

_____very easy
_____ too difficult

3. Will you implement the courseware into your staff training?

_____ yes

if so, who will use it? _____

where would it be used in your unit?

_____

_____ no

4. Mark the sentence that best describes the training you received on MDMP.

__ Exceptional. Training is above expectations.

__ Outstanding. Most required information can be trained with very few modifications.

__ Standard. Acceptable training capability.

__ Minimal training provided. Major modifications will be needed to provide adequate training.

__ Poor. Cannot train because of poor design and content.

__ Unacceptable. Provides negative training.

5. Were the examples and TTP used relevant to your unit?

___ yes

___ no, what is needed? _____

6. Quality of the courseware. Please check the appropriate box.

Media	Enhances	Distracts
Video clips		
Slides		
Graphics		
Audio		
Button layout		

7. What are the features of the computer that you used to run the MDMP software? (e.g., 486 66MHz with 16MB RAM and 4X CD ROM drive).

8. What were the best features of the MDMP training?

9. What were the worst features of the MDMP training?

10. What would you like added to the MDMP training?

Brigade Battle Captain Course Assessment

Duty Position _____ Time in current duty position _____ Unit Type _____

1. Use the following scale to rate how effectively you think the courseware trains the following Battle Captain duties and responsibilities.

1 = Very effective 2 = Generally effective 3 = Somewhat effective
4 = Generally ineffective 5 = Very ineffective N/A = Did not train

Task	Rating	Comment
Tactics Techniques and Procedures (TTPs) (overall)		
Job Aids (overall)		
Battle Captain overview (overall lesson)		
Defining the Battle Captain		
Roles and Responsibilities		
Battle Captain Notebook		
Common Problem areas		
Managing Information (overall lesson)		
Commanders Critical Information Requirements		
Requests for Information		
Battle Tracking (overall lesson)		
Battle Rhythm		
Battle Tracking Techniques		
Planner/Decision-maker (overall lesson)		
Role in Decision-Making Process		
Battle Planning Tools		
Issue WARNO & FRAGO		
OPORD Production		
TOC Shift OIC (overall lesson)		
Shift Change Planning & Briefing		
Briefing Visitors		
TOC Security		
Staff Battle Drills		

2. How easy is the courseware to use?

      _____very easy
      _____ too difficult

3. Will you implement the courseware into training your Battle Captain and other staff members?

      _____ yes

          if so, who will use it? _____

          where would it be used in your unit?

_____

      _____ no

4. Mark the sentence that best describes the quality of training contained in the Battle Captain Course.

    __ Exceptional. Training is above expectations.

    __ Outstanding. Most required information can be trained with very few modifications.

    __ Standard. Acceptable training capability.

    __ Minimal training provided. Major modifications will be needed to provide adequate training.

    __ Poor. Cannot train because of poor design and content.

    __ Unacceptable. Provides negative training.

5. Were the examples and TTP used relevant to your unit?

    ___ yes

    ___ no, what is needed? _____

6. Quality of the courseware. Please check the appropriate box.

Media	Enhances	Distracts
Slides		
Graphics		
Audio		
Button layout		

8. What are the features of the computer that you used to run the software? (e.g., 486 66MHz with 16MB RAM and 4X CD ROM drive).

8. What were the best features of the Battle Captain training?

9. What were the worst features of the Battle Captain training?

10. What would you like added to the Battle Captain training?